



Att. Docket No.: 06618-406001

AF/1745

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : S.R. Narayanan et al.
Serial No. : 09/489,514
Filed : January 21, 2000
Title : MEMBRANE-ELECTRODE ASSEMBLIES FOR DIRECT METHANOL FUEL CELLS

Art Unit : 1745
Examiner : Julian Mercado

BOX: AF
Commissioner for Patents
Washington, D.C. 20231

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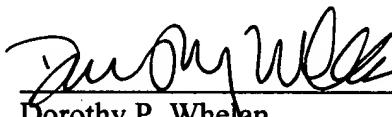
Correspondence relating to this application is enclosed.

Response to Final Office Action of June 13, 2002 (2 pgs.)

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Respectfully submitted,

Date: 9/3/02


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RESPONSE

Claims 7-20 are pending in this application.

Claims 7-11, 13, 14, 18, and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico et al. (U.S. Patent No. 5,677,074) in view of the Dupont Zonyl reference. The Examiner asserts that both Serpico et al. and the Dupont Zonyl reference are disclosures which are pertinent to the use of catalyst inks and thus, the references are mutually relevant. This is, however, incorrect. The Serpico et al. reference teaches a catalyst layer that contains catalyzed carbon particles that are intimately mixed with a nonionic fluoropolymer (e.g., PTFE). The fluoropolymer performs the role of a binder for the catalyst particles (see, for example, col. 4, lines 40-43 and FIG. 2). Consistent with this purpose, Serpico teaches melting or otherwise causing the particles to flow, thereby coating the catalyst particles. This is not the case for the Zonyl particles either as described in the Zonyl product literature or in the applicants' process. The Zonyl product literature describes a very different function for these particles (i.e., as an additive in the preparation of printing inks and coatings for improving ink properties, such as gloss, rub resistance, surface smoothness, and slip). In the applicants' process, the Zonyl particles also are not performing the role of a binder. Rather, they cause hydrophobic disturbances within the catalyst layer. Consistent with this function, applicants

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apply the catalyst layer at room temperature. Therefore, it would not have been obvious for one skilled in the art to merely substitute the particles in the Serpico reference (which are used as binder) with those in the Zonyl reference (which are used as an additive in printing inks and coatings) in order to achieve the present invention. Accordingly, the claims would not have been obvious in view of the combination of cited references and the rejection should be withdrawn.

The remaining rejections relate to dependent claims and are based upon the Serpico and Zonyl references discussed above, plus additional references cited for allegedly describing additional features found in these dependent claims. The tertiary references, however, do not remedy the deficiencies of the Serpico and Zonyl references. Furthermore, since the Serpico and Zonyl references fail to describe the subject matter of the independent claims from which these claims depend, the rejection of the dependent claims must fail as well. No further argument based upon the additionally cited references is needed. Accordingly, these rejections must be withdrawn as well.

Applicant asks that all claims be allowed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: August 30, 2002


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